

## ABSTRACT OF THE DISCLOSURE

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A method for in-place memory management in a Digital Signal Processing (DSP) architecture performing a Fast Fourier Transformation (FFT) upon a sequence of  $N$  data points, the sequence numbered from 0 to  $N-1$ , the method including storing each of the data points numbered from 0 to  $(N/2)-1$  in a first memory space  $X$  and each of the data points numbered  $N/2$  to  $N-1$  in a second memory space  $Y$ , for each FFT stage 0 data point grouping including a first data point of the data points in the first memory space  $X$  and a corresponding second data point of the data points in the second memory space  $Y$  determining the parity of a data point memory index corresponding to the first and second data points, storing, if the parity is of a first parity value, the results of an FFT operation upon the first data point at the memory address in the first memory space  $X$  from which the first data point was fetched and the result of an FFT operation upon the second data point at the memory address in the second memory space  $Y$  from which the second data point was fetched, and storing, if the parity is of a second parity value, the results of an FFT operation upon the first data point at the memory address in the second memory space  $Y$  from which the second data point was fetched and the result of an FFT operation upon the second data point at the memory address in the first memory space  $X$  from which the first data point was fetched.